

SDT North America

Technical Data

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**The Little Blue Wonder
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The Unit Contains:

FUSUIT170	Samsonite briefcase SDT 170 + foam
FU170M	SDT 170 M unit with battery rubber protection and user manual
FSPRECIND	Precision indicator (Threaded tip, rubber tip, 2 plastic tubes)
FUHEADPH	Headphone 130 dB
FUPS170EU (GB)	Battery loader SDT 170 - 110VAC or 240VAC for EU countries
FUSTRAP	Shoulder strap for 170
FSSON170	Contact probe 170 + needle
FUTOPUNCH	Center punch
FUSOFTDATAMAN1	CD-ROM DataManager Software with user manual
FUCABRS232/170	Cable RS 232 Stewart - SubD9 female L 1,5m
FUCONDB25/DB9	Adaptor DB25 - DB9

Technical Data:

Function	Multifunction detector.
Display	Extended temperature Graphic High contrast LCD with backlighting 100 x 32 pixels
Keyboard	8 function key's.
Ultrasonic sensor	- Internal & External .
External sensors	- Sound level (noise level) dBA, RPM, Air mass flow(sccm), Temperature,
Data Logger	- Capacity of approx. 60 000 measurements (includes time, date unit and type of sensor used). - Identification of the measuring points: up to 15 000 points per route (12 characters alphanumeric code/point) with 4 point history, optional expandable upto 32 - Bi-directional data transfer.
Communication	- RS 232 C communication interface (19,2 kBaud). - IRDA communication interface (115 kBaud).
Measuring range	-10dB μ V to 120dB μ V
Accuracy	\pm 0.5dB μ V
Measuring resolution	0.1dB μ V
Signal to Noise ratio	-5dB μ V typical
Bandwidth	(-3dB) 2kHz
Frequency range	0 to 200 kHz depending on the sensor
Battery pack	- Rechargeable NiMH (Nickel Metal Hydrate). - Autonomy of 8 to 10 hours without backlighting. - Recharge time: 5 to 6 hours. - Nominal Capacity: 1,3 Ah. - Life span: 500 to 1000 charge/discharge cycles. - Recharge only with appropriate charger.
Auto power down	Auto power down after pre set time.
Operating temperature	-10 °C to +60°C / 14 °F to 140 °F.
Housing	Extruded aluminum.
Weight	Approx. 700 g / 24.69 oz. (with battery and holster included).
Dimensions	203 x 38 x 88 mm / 8 x 1.5 x 3.4 inches (L x H x W).
Holster	Rubber resistant to hydrocarbons (Fluor silicone).



SDT Ultrawave 170MD

Item Code: FS170MDUS

General Description:



The SDT Ultrawave 170MD (Multifunctional with Datalogger) is the complete ultrasonic inspection and predictive maintenance trending machine. With all the features of the 170S Standard and 170M Multifunctional, we've added a 15,000-point customizable data logger that interfaces directly with your PC via DataManager software.

DataManager software is the bridge between your SDT 170 MD Ultrasonic Detector and your PC. Any and all data measured by the SDT 170 MD can be stored temporarily in the onboard data logger. DataManager allows this information to be downloaded via RS232 communications to a PC. Once inside the PC, DataManager organises the measurements into a logical and easily retrievable filing system, which is built and

customized by the individual user.

Customized routes can be created within the DataManager software (up to 30 routes in total) and uploaded to the SDT 170MD (up to 15 routes at a time complete with historical data on each machine). Warning and alarm levels are set for individual assets and data can be presented in list or graphical form. All results can be exported to an ASCII or DBF format.

It is possible to store up to 15,000 measurements for each memory location, the last four measurements are stored (rolling memory, FIFO) and are retrievable at any time. Visit our website to download current firmware updates and system enhancements.

The main functions of the DataManager software are:

- ✓ **Create and customize routes**
- ✓ **Upload routes from PC to SDT 170MD**
- ✓ **Download measured data from SDT 170MD to PC**
- ✓ **Organize data into graphical or report formats**
- ✓ **Alert when an alarm is exceeded**
- ✓ **Trend data and provide historical info on the health of plant machinery**

The Unit Contains:

FUSUIT170	Samsonite briefcase SDT 170 + foam
FU170M	SDT 170 M unit with battery rubber protection and user manual
FSPRECIND	Precision Indicator (Threaded tip, rubber tip, 2 plastic tubes)
FUHEADPH	Headphone 130 dB
FUPS170EU (GB)	Battery loader SDT 170 - (110VAC or 220VAC for EU countries)
FUSTRAP	Shoulder strap for 170
FSSON170	Contact probe 170 + needle
FUTOPUNCH	Center punch

Technical Data:

Function	Multifunction detector.
Display	Extended temperature Graphic High contrast LCD with backlighting 100 x 32 pixels
Keyboard	8 function key's.
Ultrasonic sensor	- Internal - External .
External sensors	- Sound level (noise level) dBA, RPM, Air mass flow(sccm), Temperature,
Data Logger	- Capacity of approx. 4 000 measurements (includes time, date measurement unit and type of sensor used).
Measuring range	-10dB μ V to 120dB μ V
Accuracy	\pm 0.5dB μ V
Measuring resolution	0.1dB μ V
Signal to Noise ratio	-5dB μ V typical
Bandwidth	(-3dB) 2kHz
Frequency range	0 to 200 kHz depending on the sensor
Battery pack	- Rechargeable NiMH (Nickel Metal Hydrate). - Autonomy of 8 to 10 hours without backlighting. - Recharge time: 5 to 6 hours. - Nominal Capacity: 1,3 Ah. - Life span: 500 to 1000 charge/discharge cycles. - Recharge only with appropriate charger.
Auto power down	Auto power down after pre set time.
Operating temperature	-10 °C to +60°C / 14 °F to 140 °F.
Housing	Extruded aluminum.
Weight	Approx. 700 g / 24.69 oz. (with battery and holster included).
Dimensions	203 x 38 x 88 mm / 8 x 1.5 x 3.4 inches (L x H x W).
Holster	Rubber resistant to hydrocarbons (Fluor silicone).



SDT Ultrawave 170M

Item Code: FS170MUS

General Description:



The SDT Ultrawave 170M is the multifunctional upgrade from the entry level SDT 170 S Standard. It is a robust instrument capable of detecting small or large pressure and vacuum leaks in high noise environments and trending the condition of rotating machinery components such as bearings, gears, couplings, etc...

Automobile makers use the 170M for in conjunction with ultrasonic transmitters to check for wind noise around doors and windows as well as the ingress of water. Likewise, ship owners check hatch covers. It features:

- ✓ **Digital measurement and readout capabilities**
- ✓ **Contact Probe for contact acoustic vibration measurements**

- ✓ **1000 point memory storage for recording measured data (up to 4000 measurements can be saved)**
- ✓ **Compatibility with Multi-functional sensor inputs (temp, rpm, ph, mass flow, lux, dBA)**
- ✓ **Ultrasonic sensor inputs (flexible probe, magnetic probe, parabolic waveform sensor, threaded sensor)**

The Ultrawave 170M displays measured data in a large digital format. All measured data can be stored and recalled on the 1000-point memory. The M version is easily upgraded to the MD version via the Internet. Visit our website to download current firmware updates and system enhancements.

The Unit Contains:

FUSUIT170	Samsonite briefcase SDT 170 + foam
FU170S	SDT 170 S unit with battery, rubber protection and user manual
FSPRECIND	Precision focusing indicator (Threaded tip, rubber tip, 2 plastic tubes)
FUHEADPH	Headphone 130 dB noise attenuation
FUPS170EU (GB)	Battery loader SDT 170 - 110VAC (220VAC for EU available)
FSSON170	Contact Probe with Needle*
FUSTRAP	Shoulder strap for 170, switchbox or Datalogger

*Some dealers may sell the contact probe optionally, check with your local supplier prior to ordering

Technical Data:

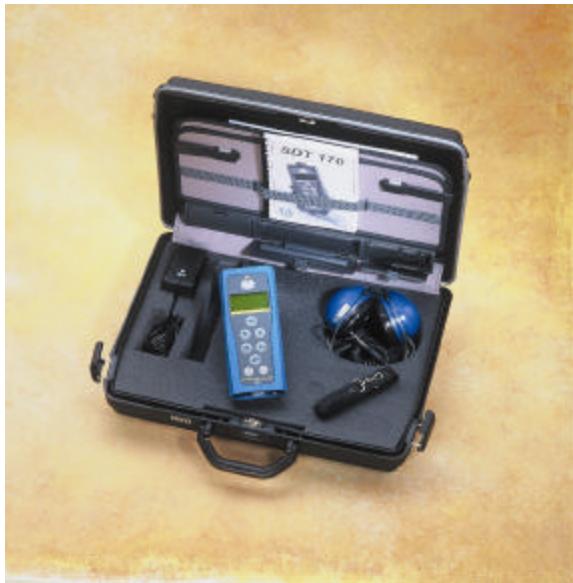
Function	Multifunction detector.
Display	Extended temperature Graphic High contrast LCD with backlighting 100 x 32 pixels
Keyboard	8 function key's.
Ultrasonic sensors	- Internal - External .
External sensors	- Sound level (noise level) dBA, RPM, Air mass flow(sccm), Temperature,
Measuring range	-10dB μ V to 120dB μ V
Accuracy	\pm 0.5dB μ V
Measuring resolution	0.1dB μ V
Signal to Noise ratio	Max -5dB μ V typical
Bandwidth	(-3dB) 2kHz
Frequency range	0 to 200 kHz depending on the sensor
Battery pack	- Rechargeable NiMH (Nickel Metal Hydrate). - Autonomy of 8 to 10 hours without backlighting. - Recharge time: 5 to 6 hours. - Nominal Capacity: 1,3 Ah. - Life span: 500 to 1000 charge/discharge cycles. - Recharge only with appropriate charger.
Auto power down	Auto power down after pre set time.
Operating temperature	-10 °C to +60°C / 14 °F to 140 °F.
Housing	Extruded aluminum.
Weight	Approx. 700 g / 24.69 oz. (with battery and holster included).
Dimensions	203 x 38 x 88 mm / 8 x 1.5 x 3.4 inches (L x H x W).
Holster	Rubber resistant to hydrocarbons (Fluor silicone).



SDT Ultrawave 170S

Item Code : FS170SUS

General Description:



The Ultrawave 170S (Standard) is the entry-level point for the 170 platform and features standard airborne ultrasonic detection with an integral sensor. It is primarily used for compressed air leak and vacuum leak detection, verifying the tightness of seals in a car, plane, truck, train, clean rooms, vessels, ship hatch covers, etc...). It is a low cost solution for the detection of electrical problems (arcing, corona, tracking), inspection of steam traps, hydraulic and pneumatic circuits, cavitating pumps, and general mechanical inspections where trending and measured data is not critical.

All measured signals are displayed on a segmented analogue bar graph. The SDT Ultrawave 170 S version is equipped with an internal airborne ultrasonic sensor and can be used in combination with all external ultrasonic sensors (contact probe, magnetic sensor, threaded sensor, flexible sensor, parabolic waveform concentrator, and waterproof airborne sensors).

The Ultrawave 170S can be fully upgraded, over the Internet, to the 170M (Multifunctional) and 170MD (Multifunctional/Datalogger) versions. Visit our website to download current firmware updates and system enhancements.



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Item Codes: FS170SUS/FS170MUS/FS170MDUS



The Ultrawave 170 encompasses our company's 25-year experience in the fields of ultrasonic inspection, predictive maintenance, and quality control. It is robust, lightweight, user friendly and ergonomically designed. The Ultrawave 170 is an efficient, easy-to-use, easy-to-implement solution for all industries interested in proper and effective predictive maintenance, environmental monitoring, and product quality assurance.

The Ultrawave 170 is multifunctional. Ultrawave is a platform much like a desktop PC. It is a single hardware configuration that transforms to your changing needs. It is capable of measuring several physical parameters (ultrasound, audible noise, temperature, rpm, flow, lumens, pH, and more). All versions are built around our world famous ultrasonic detection capabilities and feature an integral airborne ultrasonic sensor. Upgraded versions can collect, store, and transfer data to and from a PC.

The Ultrawave 170 is ergonomically designed and user-friendly. The Ultrawave 170 is a comfortably designed hand-held instrument controlled by an eight key touch pad. A generous 3cm x 6cm is protected by a Borosilicate glass screen and displays all parameters needed for its use in 8 or more different languages. The technical training requires about ten minutes. An extruded aluminium outer shell is protected by "anti-shock" insulation and the NMHD rechargeable battery block uses latest battery technology allowing more than eight hours of use and unrestricted charging practices.

The Ultrawave 170 is intelligent. The Ultrawave 170 automatically recognises the sensors upon connection and switches to appropriate parameters and measuring mode accordingly. Some versions are equipped to accept user-defined parameters such as the measurement and collection of data at set intervals. The use of flash EEPROM technology allows us to transmit by Internet constant upgrades, updates, and improvements to our dealers and users worldwide.

The Ultrawave 170 is digital and versatile. The advanced, state of the art, digital SMT electronics permits the use of other original accessories. The 170 processes data digitally, displays it digitally, and outputs it in standard digital protocol formats. As our customers develop new applications, we meet their requests by developing sensors to suit those needs. Whether the result of a request or as a perceived need for industry, over time the 170 will expand its functionality and versatility indefinitely.